Formation of an Integrated Approach to Conducting Financial Analysis of the Company's Equity Based on Aspects of Information Management

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Abstract

Equity is the basic structural component of the development of any business, so it is important for an industrial enterprise to develop tools to determine its effective management. It is impossible without conducting qualitative financial analysis, timely and effective adaptation of valuation approaches in the modern conditions of functioning of enterprises. The effective functioning of enterprises is impossible without the use of modern complex methods, which include not only a methodology, a system of indicators, but also modern technologies for their assessment, planning and control. Information management is one of these technologies. To solve the problems of the study we used the method of structural-logical analysis, methods of theoretical generalization and comparative analysis, synthesis and method of grouping of absolute and relative values, graphical method and information management methods. The result of the study is the formation of a comprehensive approach to the financial analysis of the equity of the enterprise on the formed system of four groups of indicators. These indicators take into account the state of equity, its efficiency, ensuring risks in the process of the enterprise and directions of financial analysis.

Keywords: Equity capital, Financial analysis, Integrated approach, A system of indicators, Ensuring of the functioning of the enterprise, Aspects of information management.
Introduction

Capital is a basic structural component of the development of any business, and capital, which is focused on long-term economic success at is complex, multidimensional and, therefore, an under-researched economic category, and there are various approaches to defining and structuring it. Researchers confirm that the most important elements of the process of making effective financial decisions, backed by information on the relationship between internal factors, is the process of managing equity, and its value is the result of stable successful development of the company (Mokhova, Zinecker & Meluzín, 2018; Artiach & Clarkson, 2011). In particular, the imbalance in the capital structure is one of the important problems of the activity of any business entity and often leads to a decrease in the efficiency of its activity and a decrease in the values of financial and economic indicators. In addition, one of the main causes of the crisis for most Ukrainian business entities is the existence of an uneven capital management system, incorrect definition and calculation of the ratio between equity and attracted capital, ensuring its efficient use and risks (Markova, Volodina, Mytrofanov & Chehlatonieva, 2019). That is why it is very important for an industrial enterprise to develop tools for determining such a balance, to conduct a qualitative financial analysis of equity capital, to timely and effectively adapt approaches to such assessment in the current conditions of internal and external environment of the enterprise functioning.

The conducted researches and topicality of the selected questions determined the choice of the purpose, directions, methods of this research, conducted by the authors in accordance with the thematic plans of the research work of Odessa National Academy of Food Technologies. Therefore, the purpose of this article is: to substantiate an integrated approach to the analysis of equity and to substantiate the formation of a system of indicators for assessing the condition, structure, use and risk of equity of an industrial enterprise in conducting financial analysis to effectively manage it in modern conditions of functioning in the external and internal environment. The authors investigated domestic and foreign literary sources on financial analysis of the company's equity, information materials on Internet sites, as well as other official normative documents, laws and other materials, which formed the theoretical and methodological basis of this research.

One of the significant components of the assets of an enterprise is its non-current assets, i.e. share capital of the enterprise. Since the fixed capital is involved in all types of enterprise activity, the process of managing the activity through its use is a complex of interrelated functions of managing the main capital, which are carried out in a certain sequence and are aimed at improving the efficiency of its use and solving specific problems (Stupnytska, Kalaman & Markova, 2019).

The relevance of the study is confirmed by previous studies on the competitiveness of
enterprises in the context of ensuring the competitiveness of the national economy, presence of large numbers of unprofitable enterprises in various industries, such as in the food industry (Kuprina, Baraniuk & Vaskovska, 2019), and profit is a large part of enterprises equity and, for example, forms its reserve capital.

**Literature review**

Each category has its own evolution of development without any "classical approach", that is, the emergence of certain concepts is not subjective, but objective, which is based on the generalization of centuries-old practice of accounting, financial analysis, control (Ivchenko, 2016). The essence of the concept of "equity" is considered by scientists both in the modern economic literature and in the regulatory and legislative field. Analyzing the presented provisions, we can conclude that almost all researchers in the economy identify capital as certain real property, capable of creating new goods and generating income for its owner (Markova et. al., 2019).

The essence of the concept of "equity" is considered by scientists both in the modern economic literature and in the regulatory and legislative field. Analyzing the presented provisions, we can conclude that almost all researchers in the economy identify capital as certain real property, capable of creating new goods and generating income for its owner. Burkynskyi B. and Horiachuk V. state “… it is not only capital in the narrow (classical) sense as a physical capital (fixed assets) but also a human, natural, social capital and intangible assets (Burkynskyi & Horiachuk, 2014). This is confirmed by the studies of Perevozova I., Daliak N. and Babenko V., that effective management of human capital in industry leads to ensuring the competitiveness of enterprises and reducing costs (Perevozova, Daliak & Babenko, 2019).

Thus, in summarizing the various interpretations of the concept of "equity", we can say that in our view, the equity of the enterprise - this is part of the resources of the entity invested in the process of operations and generating profit.

It should be noted that the controversial issue is the ratio between equity and debt capital, which ensures the most effective proportion between profitability and financial sustainability of the enterprise. In the most general form, the concept of "capital structure" is characterized as the correlation of own and borrowed funds that an enterprise uses in the course of its business activities. Yes, the ratio of equity to attracted capital in different countries is not the same for determining the financial sustainability of an enterprise: at the enterprises of Japan the attracted capital is 80% and this is a normal ratio whereas in European countries, in the USA, in Ukraine, the equity should be at least 50 % of the total capital of the enterprise (Stupnytska, 2015).

As the research shows, the peculiarities of forming the components of the equity of enterprises are determined by the norms of the legislation concerning the organizational and
legal forms of enterprises and forms of their ownership, as well as the order of formation and movement of equity capital. The dynamics and structure of the company's own capital depend to a large extent on changes occurring in its individual components. The basis of equity of most businesses is registered capital. The sources of formation of the registered capital are own funds, property and other assets of the founders (Ivchenko, 2016).

In the course of business, registered capital may be increased or decreased. In forming the registered capital of the enterprise, participants are faced with the problems of determining its total size and the size of each contribution, the subject of the contribution and the term of payment of contributions (Danilova & Melnyk, 2012). The equity of some enterprises is based on share capital: in collective agricultural enterprises, housing cooperatives, credit unions for the purpose of economic and financial activity, the initial capital is formed at the expense of the share contributions of their members, so it is called share capital. Unlike the statutory capital, the share capital is not recorded in the charter of the enterprise. The mechanism of formation of share capital of individual enterprises is similar to the mechanism of formation of registered capital. Share capital is a collection of funds of individuals and legal entities, voluntarily placed in a company for carrying out its economic and financial activities. Additional invested capital is the sum of the founders' contributions over the registered part. Additional investment in most enterprises is absent or negligible. One of the main indicators that characterizes the performance of any entity is retained earnings (uncovered loss). Retained earnings (uncovered loss) is the portion of net income that has not been distributed among owners. Reserve capital is the amount of reserves created, in accordance with applicable law or constituent documents, at the expense of retained earnings of the enterprise. Other additional capital includes the following types of additional capital: capital from the revaluation of fixed assets - the capital generated as a result of the revaluation of assets; donation capital is the value of assets received free of charge by an enterprise from other legal or natural persons, and other types of additional capital (National regulation (standard) of accounting 1).

According to the National Regulation (Standard) of accounting for equity include capital, which affects the formation of the registered capital refers to equity of the enterprise: in case of redemption of own shares from shareholders for the purpose of their resale or cancellation, joint stock companies reflect the exclusion of capital-actual cost (capital withdrawn); the debt of the founders (participants) of the state partnership is unpaid of purchased shares capital. Thus, this standard defines the term "Equity" as "the portion of the assets of an enterprise that remains after deducting its liabilities" (National regulation (standard) of accounting 1).

Effective management of its own capital requires an effective management policy, which is important for financial analysis of the formation and use of equity in the previous period, which is the initial stage of managing it.
The research has shown (Markova et al., 2019), that a significant contribution to the study of the modern concept of "capital", "equity", the formation and its structuring at industrial enterprises have been made by such prominent scientists-economists as: Antonyuk O., Arefyeva A., Artiach T., Balatsky O., Basilevich V., Blank I., Burkinsky B., Butinets F., Clarkson, P., Golov S., Hicks J., Kakhoyskaya O., Makarova G., Meluzín T., Mokhova N., Poddyrogin V., Polyakova G., Sopko V., Zinecker M.

The works of scientific and practical direction by Antonyuk O., Barabash N., Blank I., Deeva N., Kim J.-B., Ma M.L.Z., Mnyh Ye., Polyakov G., Sheremet O., Tsal-Tsalco Y., Vlasyuk N., Wang H. and other scholars are devoted to Investigation of aspects of financial analysis, including the equity of the enterprise. However, it should be noted that some aspects of financial equity analysis and the selecting a metric system and evaluating it are still debatable and need further investigation and elaboration.

Research of scientific and practical sources on conducting the financial analysis of the enterprise showed that most authors carry out research of the equity of the enterprise in carrying out the analysis of financial status, namely: analysis of the dynamics, composition, structure of equity the calculation of the relative indicators of the financial condition of the enterprise, which characterize the ratio of own and borrowed funds, analysis of return on equity, which is not complete and does not take into account the risks and the state of its provision.

In order to qualitatively evaluate the effectiveness of the activity or operation of the research object, it is important to choose a system of indicators and a comprehensive approach to such evaluation.

The need for the formation of a system of indicators and the choice of criteria for such evaluation of the efficiency of the enterprise's operation is confirmed by research of scientists: «when modeling a multicriteria assessment of enterprise activity to ensure its reliability and objectivity, it is recommended to follow the appropriate methodological approach for calculating this estimate» (Malyarets, Babenko, Nazarenko & Ryzhikova, 2019).

Calculation of the system of indicators and assessment of the formation, efficiency of functioning, minimization of risks and stability of equity capital is impossible without modern technologies such as information management. The publications of many scientists, such as Babenko V., Gontareva I., Oliynyk Y., Voloshko N., Yevtushenko V. (Gontareva, I., Babenko, V., Yevtushenko, V., Voloshko, N., & Oliynyk, Y., 2020) and others, are devoted to the study of various aspects of information management technologies, which is very relevant today.

Data and Methodology

To solve the problems of the study, the following methods were used: the method of structural-logical analysis (when forming the structure and logic of the article); methods of theoretical generalization and comparative analysis (to study the category of "equity" and its structure; systematic comparative analysis, synthesis and grouping (to analyze approaches to the study of the system of indicators and their grouping: during the formation of four groups of indicators for assessing the state, efficiency of using the company's own capital, ensuring risks at the stages of its functioning and the direction of conducting a financial analysis of the enterprise); method of
absolute and relative values, comparative analysis, graphical method (to investigate indicators for financial analysis of equity of an industrial enterprise and formation of their system).

At the present stage, there is no single methodology for assessing equity in financial analysis in international and domestic practice, in particular, it does not take into account its stability in the face of economic changes and environmental impact on the functioning of the enterprise and risks. In our opinion, the most effective is the formation of four groups of indicators (ratios) for conducting such a study of equity, taking into account its condition, performance, ensuring risks by stages of its functioning (formation, activity, result, economic stability), and areas of financial analysis activity of the enterprise (financial stability, business activity, analysis of efficiency of functioning, economic security of capital) (Fig. 1):

**Fig. 1. Four groups of indicators for carrying out research of own capital by stages of its functioning and directions of carrying out financial analysis of the enterprise activity**

*compiled by the authors*
• indicators of sources of formation and structure of equity (formation and condition of capital);
• indicators of functioning of own capital (process of activity);
• performance indicators of the functioning of capital (economic performance);
• indicators of stability and risk minimization (economic security of capital).

Results

Studies of publications of scientists and practical features of preparation of the financial statements of the enterprise, its financial analysis have been carried out (Smokvina, 2016; Prysta, 2008; Yatsuh & Zakharova, 2018; Kvasnitskaya, 2017; Stupnytska, 2015; Blank, 2002; Filina, 2011; Antoniuk, Stupnytska & Kuprina, 2015) assessments of the status, structure, use, provision of risks and stability of equity of enterprises, allowed to form a system of indicators (Table 1).

Table 1. System of indicators of assessment of the state, functioning and safety of the company's own capital *

<table>
<thead>
<tr>
<th>Direction of financial analysis</th>
<th>Valuation indicators (coefficients)</th>
<th>Characteristics of indicators (coefficients)</th>
<th>Method of calculation</th>
<th>Normative value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>1. Indicators of sources of formation and structure of equity (formation and condition of capital)</td>
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<td></td>
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<tr>
<td>Financial sustainability</td>
<td>Coefficient of financial independence (autonomy)</td>
<td>Describes the proportion of funds invested by owners in the total value of property of the enterprise</td>
<td>$K_{Aut} = \frac{\text{Equity}}{\text{Balance Sheet Currency}}$</td>
<td>0.5 (0.3 for some countries)</td>
</tr>
<tr>
<td></td>
<td>Coefficient of the ratio of attracted and own funds</td>
<td>Describes the amount of funds raised, which accounts for UAH 1 own funds</td>
<td>$K_{Attracted/Own \text{ Funds}} = \frac{\text{(Long-term commitments + Current liabilities + Liabilities related to non-current assets held for sale and disposal groups)}}{\text{Equity}}$</td>
<td>(0.25-1.00)</td>
</tr>
<tr>
<td>Business activity</td>
<td>Capital Ratio</td>
<td>Describes the efficiency of using the equity of the enterprise</td>
<td>$K_{CR} = \frac{\text{Net income}}{\text{Average annual equity increase}}$</td>
<td>magnification</td>
</tr>
<tr>
<td></td>
<td>The coefficient of development of the enterprise</td>
<td>Self-financing ratio is defined as the ratio of reserve capital growth and retained earnings to net income</td>
<td>$K_{DevE} = \frac{\text{Increase in reserve capital increase in retained earnings}}{\text{Amount of net profit}}$</td>
<td>magnification</td>
</tr>
<tr>
<td>Financial sustainability</td>
<td>Equity maneuverability factor</td>
<td>It shows which part of the working capital is in circulation, that is, in the form which allows to freely maneuver these funds, and which is capitalized.</td>
<td>$K_{\text{Man}} = (\text{Equity} - \text{Non-current assets}) / \text{Equity}$</td>
<td>0.1 and above</td>
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</tr>
<tr>
<td>3. Performance indicators of the functioning of capital (economic performance)</td>
<td>Return on capital ratio</td>
<td>Characterizes the return on equity invested in an enterprise</td>
<td>$K_{\text{RC}} = \frac{\text{Net Profit}}{\text{Average Annual Equity}} \times 100%$</td>
<td>magnification</td>
</tr>
<tr>
<td></td>
<td>Return on equity</td>
<td>Characterizes the volume of implemented (produced) products that fall into a unit of its own capital involved in operating activities of enterprises</td>
<td>$K_{\text{RE}} = \frac{\text{Net income}}{\text{Tquity}}$</td>
<td>magnification</td>
</tr>
<tr>
<td></td>
<td>Equity multiplication factor</td>
<td>Shows how many assets there are per unit of equity</td>
<td>$K_{\text{Mul}} = \frac{\text{Balance Currency}}{\text{Equity}}$</td>
<td>&lt; 2</td>
</tr>
<tr>
<td></td>
<td>Coefficient of financial leverage ratio</td>
<td>Characterizes the use of borrowed funds by companies, which affects the change in the rate of return on equity</td>
<td>$K_{\text{FinLv}} = \frac{\text{Long-term liabilities}}{\text{Total own funds}}$</td>
<td>reduction (the decrease of this ratio at the end of the year indicates an increase in the solvency of the enterprise, and an increase in its loss and increase in financial risk)</td>
</tr>
<tr>
<td></td>
<td>Coefficient of financial stability</td>
<td>Describes what proportion of the assets of a company that is capable of financing through fixed capital and long-term capital was raised</td>
<td>$K_{\text{FinSt}} = \frac{(\text{Equity} + \text{Long Term commitments})}{\text{Balance sheet currency}}$</td>
<td>magnification</td>
</tr>
<tr>
<td></td>
<td>Payback period of own capital</td>
<td>It reflects the period during which their capital will pay off and how much equity they have</td>
<td>$T_{\text{OC}} = \frac{\text{Equity}}{\text{Net income}}$</td>
<td>reduction</td>
</tr>
</tbody>
</table>

4. Indicators of stability and risk minimization (economic security of capital)
Formation of an Integrated Approach to Conducting Financial Analysis

Indicators of economic security of capital

<table>
<thead>
<tr>
<th>Indicators of economic security of capital</th>
<th>Description</th>
<th>Formula</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>The coefficient of protection of the registered capital</td>
<td>This ratio indicates the security of the registered capital in case of difficult unforeseen situations in the enterprise.</td>
<td>$K_{ProtRC} = \text{Reserve capital} / \text{Equity}$</td>
<td>More than 0.15</td>
</tr>
<tr>
<td>Equity risk ratio</td>
<td>The value of the indicator is an indication of the level of risk of the enterprise losing the amount of its registered capital and the accumulated retained earnings.</td>
<td>$K_{rec} = (\text{Equity} - \text{additional capital} - \text{Reserve capital}) / (\text{Additional capital} + \text{Reserve capital})$</td>
<td>5 and above</td>
</tr>
<tr>
<td>Equity protection ratio</td>
<td>Characterizes the portion of equity that performs a protective function in an enterprise.</td>
<td>$K_{ProtE} = (\text{Additional capital} + \text{Reserve capital}) / \text{Equity}$</td>
<td>magnification</td>
</tr>
</tbody>
</table>

* developed by the authors on the basis of sources (Smokvina, 2016; Prysta, 2008; Yatsuh & Zakharova, 2018; Kvasnitskaya, 2017; Stupnytska, 2015; Blank, 2002; Filina, 2011; Antoniuk, Stupnytska & Kuprina, 2015).

Discussion

In our opinion, the system of indicators was formed that will allow to carry out qualitative financial analysis of the company's own capital in order to more effectively manage the equity of the enterprise, the structure of its sources, influence the solvency and financial condition of the industrial enterprise, ensuring the risks of its functioning.

1. Thus, these indicators allow to obtain the following information about the status, risks and protection of equity of an industrial enterprise (Kobyletskyi, 2020):

2. Equity Protection Ratio: Demonstrates a portion of equity that performs a hedging function in an enterprise. High value indicates a large reserve fund and additional invested capital, which can be used in the event of unforeseen processes in the enterprise and deterioration of the type of financial stability.

3. Equity risk ratio: the value of the indicator is an indication of the level of risk of the company losing the amount of its statutory capital and accumulated retained earnings. In the event of deviation from the normative value, the confidence in the enterprise itself decreases, because in case of crisis situations there is a risk of non-repayment of the creditors' funds. The normative value is 5 and above. In case of deviation, it is advisable to work towards increasing the statutory capital of the enterprise.
4. Ratio of share capital protection: the ratio indicates the security-status of the statutory capital in the event of difficult unforeseen situations in the enterprise. If the value is low, such as zero, then this is a direct violation of the law. According to the current legislation, the coefficient must be at least 0.15. If the figure is lower, it is recommended that in the following years, in accordance with the legislation they should, increase the reserve fund by 5% every year.

5. Self-financing rate of development of an enterprise: means the ability of an enterprise to develop at the expense of carrying out effective activity, which generates considerable profit. The low value of the indicator indicates that most of the profits of the company were taken out of circulation, in particular for payment of dividends to shareholders.

6. Self-financing rate of development of an enterprise: means the ability of an enterprise to develop at the expense of carrying out effective activity, which generates considerable profit. The low value of the indicator indicates that most of the profits of the company were taken out of circulation, in particular for payment of dividends to shareholders.

7. Return on equity: allows you to determine the effectiveness of the equity of the company, that is, funds belonging to shareholders. Usually, a high value is a positive indicator. In turn, low value indicates inefficient movement of capital in the enterprise, which leads to a decrease in its value. The upward trend has been a positive trend for several years.

8. Equity turnover: Indicates how many goods and services the enterprise has been able to produce to provide clients with equity investment in this year for each hryvnia. The constant increase in the use of equity is a positive trend and reflects its growth.

Conclusion

For the sustainable development of domestic enterprises, ensuring the efficiency of their activities and competitiveness in modern conditions a systematic approach is required to managing the equity of the enterprise, formation of an effective management policy, the first stage of which is a qualitative comprehensive financial analysis in the previous period.

The study allowed the formation of a system of indicators for conducting a qualitative financial analysis of the enterprise’s equity on the basis of four groups of indicators that take into account its condition, work efficiency, ensuring risks at the stages of its functioning - formation, activity, result, economic stability and directions of financial analysis of enterprises - financial stability, business activity, performance analysis, economic security of capital.

Such an approach to conducting a financial analysis of equity will allow managers and management of the enterprise to more effectively manage its condition and structure in accordance with its management policy and to form directions for its effective use.
The scientific novelty of this study is to develop a comprehensive approach to financial analysis of equity based on the generated system of four groups of indicators, which is relevant. As a rule, financial analysis is aimed at assessing the financial condition of the enterprise, the liquidity of its balance sheet and business activity. But in the current conditions of absence or a small amount of working capital, a negative financial result from all types of activities - loss-making enterprise the in-depth analysis of state, structure, efficiency in the use and maintenance of risks of the enterprise equity is very important in the financial analysis of the sources of assets formation. The next step in our study is the development of new evaluation criteria depending on the state and effectiveness of the functioning of the equity of enterprises.

Thus, increasing the amount of equity and its effective structure is one of the key tasks of any commercial enterprise, therefore, a significant increase in capital may indicate effective management, sound financial, commercial, competitive, industrial policies, etc., which confirms the relevance of this study.

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References


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